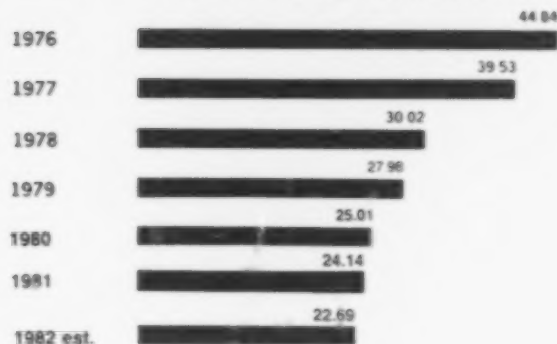


A 9600-2 U A
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1976-1982

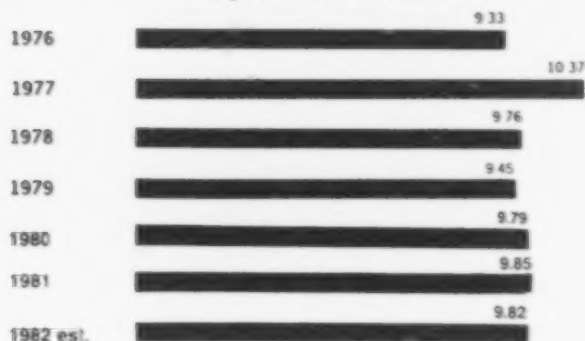
U.S. AUTOMOTIVE
MARKET FOR
ZINC DIE CASTING

AVERAGE ZINC D.C. MARKET BY MODEL YEARS IN LBS.



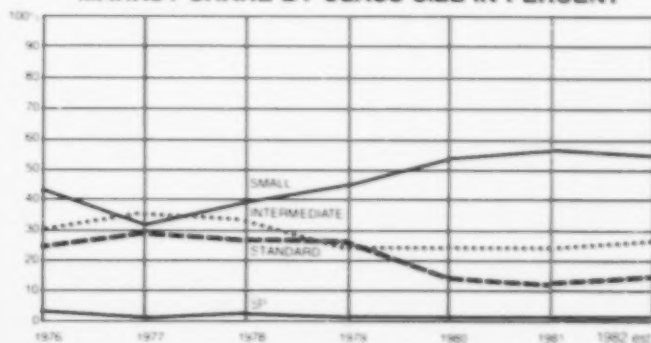
This graph shows the weight of zinc die castings for the average car including optional equipment for the model years listed. The decline is due to substitution, elimination of parts, and increased use of ThinWall zinc die castings. No after-market production, truck or van use is included in these figures. It has been estimated that after-market die castings account for 3 to 5 pounds, and trucks use between 15 to 20 pounds of zinc per vehicle.

AVERAGE ZINC D.C. OPTIONAL EQUIPMENT IN LBS.



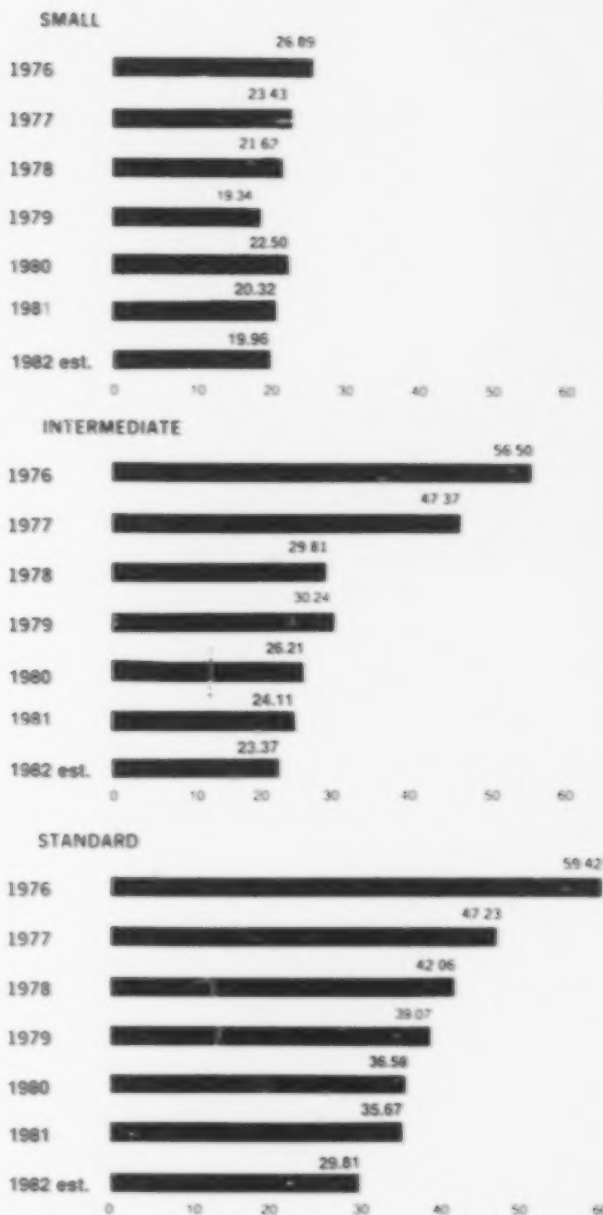
Economy-consciousness does not mean devoid of luxury to most American car buyers. The vast majority orders a car with automatic transmission, power steering, power brakes, steel belted radial tires and remote control sideview mirrors for an added measure of safety. Well over half of all car buyers order optional air conditioning. Based on the optional equipment on the small cars, intermediates and on the standard size cars, the weighted average for each year is depicted on the above graph. It is apparent the options ordered for the small cars have increased, resulting in a near constant average value.

MARKET SHARE BY CLASS SIZE IN PERCENT



With the move to increased gas mileage to meet government regulations the small and intermediate size cars will tend to dominate the market. The standard size vehicle, although downsized, will be lower in demand. With the projected higher cost of gasoline the consumer will feel a need to economize, or to buy a more fuel efficient car.

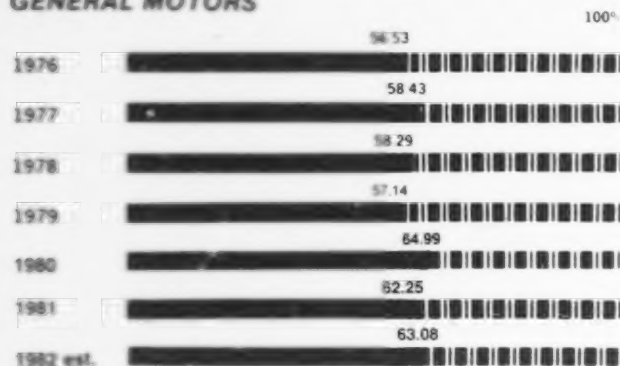
AVERAGE ZINC D.C. MARKET BY SIZE CLASS IN LBS.



The small cars never did use very many zinc die castings. The intermediates and standards held up well until 1977 and dropped in 1978 mainly due to General Motors downsizing its entire line. The loss of zinc per vehicle can be attributed to continuing austere design, as well as a dropping of certain standard-sized cars into the intermediate category.

MARKET SHARE BY MANUFACTURER IN PERCENT

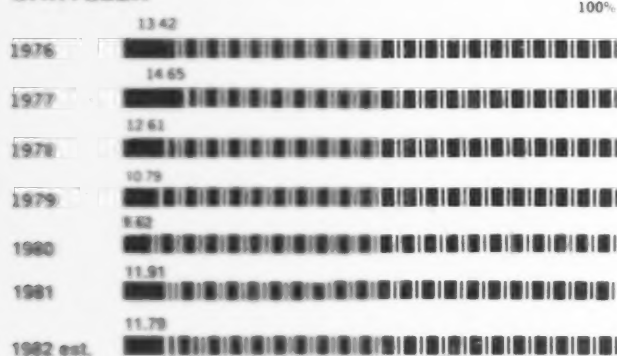
GENERAL MOTORS



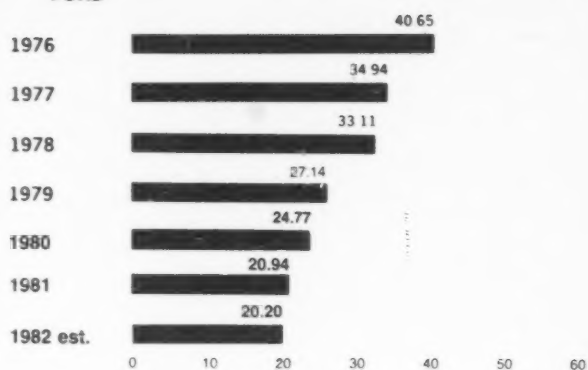
FORD



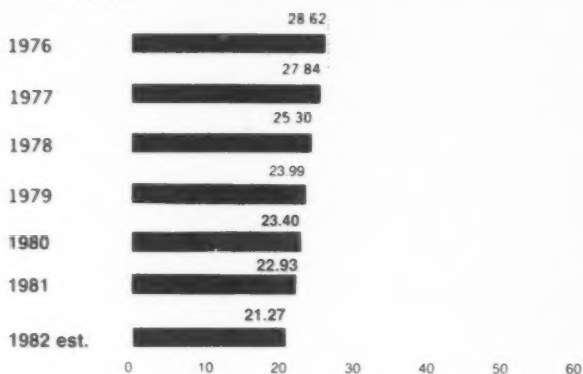
CHRYSLER



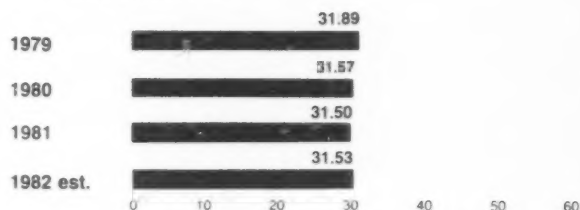
FORD



CHRYSLER

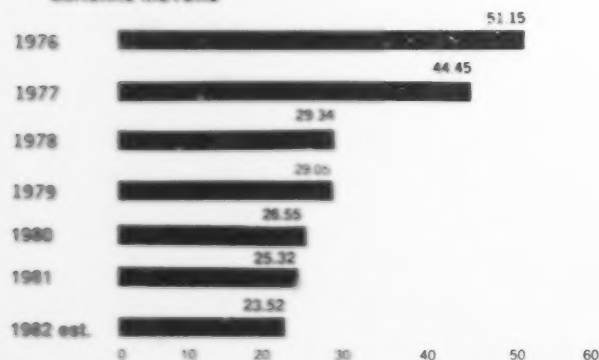


AMERICAN MOTORS



AVERAGE ZINC D.C. MARKET BY MANUFACTURER IN LBS.

GENERAL MOTORS



The average zinc die casting usage per vehicle by manufacturer is illustrated in the above chart. Always the largest due to its market dominance, General Motors buys the lion's share of automotive zinc die castings. This is still true for 1982, in spite of five years of drastic redesign and downsizing of standard and intermediates. Number two in automotive production, Ford, is also second largest purchaser of automotive zinc die castings. Chrysler's use of zinc die castings per vehicle has remained relatively constant for the last six years. American Motors uses more zinc die castings on its average vehicle when compared to the other automotive manufacturers. For 1982, this amounts to 31.53 lbs.

1976-1982

U.S. AUTOMOTIVE
MARKET FOR
ZINC DIE CASTING

Zinc Institute Inc.

292 Madison Ave. New York, NY 10017
17080 Masonic, Fraser, MI 48026

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